

REMARKS

Summary of the Office Action & Formalities

Claims 1-24 are all the claims pending in the application.¹ By this Amendment Applicant is amending claims 1, 4, 5, 9, 15, and 17. Applicant is also adding new claims 25-29. No new matter is added.

Applicant thanks the Examiner for entering the Amendment under 37 C.F.R. § 1.116 filed on April 2, 2003 and entered pursuant to Applicant's RCE filed on April 29, 2003.

The prior art rejections are summarized as follows:

1. Claims 1-2, 8-9, 12, 17-21 and 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Crededio et al. (U.S. Patent No. 5,435,740).

2. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crededio et al. (U.S. Patent No. 5,435,740).

Claims 3-7, 13-16 and 22 are objected to as being independent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 U.S.C. § 102

Independent claims 1 and 17, as amended, recite methods of providing a medium voltage interconnection, including the step of providing a flexible tube having, coaxially starting from the center, a first semiconductive layer and an insulating layer of elastomeric material. Apparatus claim 9 recites a medium voltage interconnection, including a flexible tube having,

¹ The Examiner has inadvertently indicated that claims 1-16 are pending (see form PTO-326).

coaxially starting from the center, a first semiconductive layer, and an insulating layer made of elastomeric material.

Accordingly, in these claims, the conductive core is composed of a conductor connected to two electrical connectors, enclosed within the elastic flexible tube to define connection insulated interfaces for mating the receiving connectors of the equipment. Therefore, the method of the invention (and the corresponding apparatus) as claimed allows improved flexible interconnections due to the flexibility of material and dimensions. Additionally, the semiconductive layer further allows one to provide a medium voltage interconnection (i.e. a voltage that is greater than 1 kV).

Only Crededio has been applied by the examiner to reject claims 1, 9, and 17. Referring to Figs. 1 and 3 of this reference, Crededio discloses a locking sleeve interconnection 1 for realizing an electrical connection between two conductor cables 14 (conductive wires 15 encased by an insulating sheath 16).

This sleeve includes two electrical connectors 17 (male plug) and 18 (female plug), with each of the connectors mating to one of the conductor cables 14. The connector 17 has a protruding member 28 and the connector 18 has a cavity 29, so that said connectors 17 and 18 are electrically connected together via the disposition of the protruding member 28 into the cavity 29. The assembly having both connectors 17 and 18 is inside two parts formed by conductive cylinder 10.

A heavy-duty polyolefin shrinkable tube is applied over locking sleeve interconnection 1 for creating a skin-tight moisture seal. The locking sleeve 1 has a three parts formed device (see

figure 10 and references 2, 3 and 4) made of an electrically insulating hard material made of glass and polyester (see column 2 lines 26-34).

Therefore, Crededio et al. discloses a non-flexible interconnection allowing to connect two cables (for Instance cables for filming equipment) used in outdoor environment with a moisture barrier.

The object of claims 1, 9, and 17, on the other hand, is to provide a flexible medium voltage (i.e. greater than 1 kV) interconnection. This object cannot be obtained by the interconnection disclosed in Crededio et al. which belongs to a remote technical field.

More specifically, Crededio et al. does not teach or suggest a flexible tube having at least a first semiconductive layer. This difference is significant, since the semiconductive layer is used to achieve the object of providing a flexible medium voltage interconnection.

As disclosed in Applicant's specification, the conductive core made of the metal conductor with its two connectors is at the same time covered, protected and insulated, by a flexible tube having at least a first semiconductive layer acting as a screen for the metal conductor. Such a semiconductive layer is important for providing an interconnection with a voltage passing through that is greater than 1kV. The flexible tubes of claims 1, 9, and 17 have a very simple structure that provides insulation and as well shielding.

Moreover, the flexibility, of the tube that directly surrounds the conductive core allows for a flexible interconnection. In Crededio et al., on the other hand, the interconnection is not a flexible interconnection, because it requires the complexity of three parts to form the locking sleeve made of a hard non flexible insulating material and surrounding the two electrical connectors 17 and 18. The polyolefin tube used in Crededio et al. is not used for its insulating

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properties but for its ability to act as a moisture barrier. In other words; in other words, this tube is not in contact with the electrical connectors 17 and 18 and does not allows for the electrical insulation of the two electrical connectors. Thus, the interconnection disclosed in Crededio et al. is completely different from that required by claims 1, 9, and 17, and does not provide for a flexible interconnection. Indeed, even if the tube of Crededio et al. is a polyolefin tube, the fact that this tube is a flexible tube is not disclosed or suggested in the reference.

For at least the foregoing distinctions, the Examiner is kindly requested to reconsider and withdraw the rejection of claims 1, 9, and 17, as well as claims 2, 8, 12, 18-21, 23, and 24 at least by reason of their respective dependencies.

Claim Rejections - 35 U.S.C. § 103

Applicants respectfully submit that claims 10 and 11 are allowable at least by reason of their respective dependencies.

New Claims

Applicant is adding new claims 25-29, which correspond to allowable claims 3, 7, 13, 16, and 22, rewritten in independent form.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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Filed herewith is a Petition for Extension of Time, with fee, and an Excess Claim Fee Payment Letter, with fee.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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